Should You Turn Yourself In? The Consequences of Self-Policing

Sarah L. Stafford

The College of William and Mary

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Self-Policing and the Audit Policy

- Self-policing occurs when a regulated entity voluntarily notifies authorities that it has violated a regulation or law.
- EPA encourages self-policing through the Audit Policy.
  - No "gravity-based" penalties for disclosed violations that meet the policy's conditions. EPA also will not recommend criminal prosecution for such violations.

"The Audit Policy is designed to provide incentives for regulated entities to come into compliance with the federal environmental laws and regulations. These incentives are for regulated entities that voluntarily discover, promptly disclose and expeditiously correct noncompliance, making formal EPA investigations and enforcement actions unnecessary."

EPA Website on Compliance Incentives and Auditing,
Accessed December 5, 2007

Theoretical Framework

- Based on Harrington's (1988) Targeted Enforcement Model:
  - Facilities divided into groups based on past compliance.
  - "Bad" facilities are targeted, i.e., inspected with higher probability than facilities with good compliance records.
  - Facilities move between groups based on inspection results.

Theoretical Framework

- When self-policing is added to a targeted enforcement regime, disclosures provide additional information that can be used to move facilities between groups.
- Also, to make the model consistent with hazardous waste compliance, there are both deliberate and inadvertent violations.

Theoretical Framework

- In the model, facilities have two choices to make:
  - Whether to deliberately violate the regulations.
  - Whether to audit to discover inadvertent violations.
- The optimal strategy depends on the facility's cost of compliance, cost of auditing, the probability of an inspection, the fine for a violation, the fine for a disclosure, and the transition probabilities.

Theoretical Framework

- A regulator can alter a facility's optimal strategy by changing inspection rates, fines, or the transition probabilities.
  - Decreasing the fine for a disclosure leads to more disclosures, and potentially more audits, at facilities in the target group.
  - Increasing the transition probability for facilities that disclose increases disclosures and audits at facilities with poor compliance records.

Theoretical Framework

- However, if facilities that disclose are rewarded with a lower probability of future inspections, they may decrease the level of deliberate compliance.
  - The leverage of the targeted enforcement regime is reduced.

Empirical Analysis

- Uses data on all facilities in the US subject to hazardous waste regulations.
  - 631,000 facilities according to RCRAInfo.
- Uses data on 2001 self-disclosures.
  - At least 1,158 facilities involved in disclosures, 325 subject to RCRA regulations.

Empirical Analysis

- Examines the effect that a 2001 disclosure has on probability that facility is inspected in 2002.
- Uses a bivariate probit regression, as decision to disclose depends in part on expected enforcement actions.
  - Model identified through exclusion restriction (State Audit Immunity).

Empirical Results – Facility Characteristics

	Inspection Equation	Disclosure Equation
Large Quantity Generator	0.73**	0.64**
Small Quantity Generator	0.21**	0.19**
Conditionally Exempt Generator	0.12**	0.03
Treatment, Storage, or Disposal Facility	0.63**	-0.29**
Transporter	0.22**	-0.11
Other Permit	0.21**	0.33**

**Significant at 95%, *Significant at 90%

Empirical Results – Enforcement and Compliance Variables

	Inspection Equation	Disclosure Equation
Inspected in 2001	0.07**	0.09
Five Year Inspection History	0.39**	0.12**
Ignored	0.04**	-0.18**
Violated in 2001	0.12**	0.04
Newly Caught in 2001	0.18**	0.02
Five Year Violation History	0.01**	-0.0003
Good Compliance Record	-0.17**	-0.02
Disclosure in 2001	-1.34**	
Disclosure in 2001 x Good Comp. Record	0.35*	

**Significant at 95%, *Significant at 90%

Empirical Results – State Variables

	Inspection Equation	Disclosure Equation
State Audit Privilege	-0.08**	-0.04
State Audit Immunity		0.18**
State Self-Policing Policy	-0.06**	0.10*
State Inspections	7.07**	0.53
State Inspection Intensity	-0.28**	-0.18**
State Violations	1.67**	1.59*
State Regulated Facilities (in 100,000s)	-0.58**	-0.74**

**Significant at 95%, *Significant at 90%

Empirical Results

- Disclosures affect the probability of inspection.
  - The magnitude of the effect depends on compliance history, but the effect is always a reduction in the probability of inspection.
- Facilities with a high probability of inspection are more likely to disclose.

Policy Implications

- The empirical analysis generally supports the targeted enforcement model with self-policing.
- In the theoretical model, facilities may increase auditing and abatement without making disclosures, so we should not evaluate the effectiveness of self-policing solely based on disclosures.

Policy Implications

- Facilities may make tradeoffs between self-policing and other forms of regulatory compliance when disclosures affect future enforcement.
  - If reduced penalties alone are not enough to induce auditing and disclosure, decreased future enforcement may be necessary to motivate self-policing.
  - Regulators need to carefully weigh the benefits of increased self-policing against the potential that facilities may strategically disclose.

Policy Implications

- How significant is the potential for strategic disclosures?
  - Disclosure rates in the regulated community are currently low, but they are likely to increase for many reasons.

Policy Implications

- Facilities with very low probabilities of inspection do not disclose.
  - However, these facilities have the lowest level of contact with regulators and thus are more likely to inadvertently violate.
  - Regulators might want to focus outreach efforts on such facilities or consider methods for increasing the incentives for these facilities.